Is there a template for online learning?

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For many years now, online learning developers, educators, instructors and designers have been seeking a way to build online courses creatively and efficiently, to both engage their students and conform to the quality standards of their organisations. They have sought, and continue to seek, ways of codifying online "best practice". Is there a template for online learning? We argue that there is not a template in the way the term is traditionally understood, that can be applied to course development and still result in an engaging online learning experience for students. We discuss traditional understanding and implementation of such templates, and provide explanation for why they are ineffective, and yet frequently used. We further explore how findings in the field of neuroeducation provide a foundation for applying biological and neurological impact to learning design. With these insights, we propose educators can take an approach based on 'why' rather than 'how', to reframe the idea of templates for the development of online courses. We encourage educators and managers of educational organisations alike to reconsider what purpose templates are currently serving in their organization, and to re-evaluate the use of templates in online course development.

Keywords: learning templates, neuroeducation, quality assurance, educational development, learning design

Introduction

> The mind is a fire to be kindled, not a vessel to be filled. Plutarch *c.* 46 – 120 AD

As contemporary education, in both the western and developing nations, moves to an increasingly online teaching and learning environment, with more and more organizations building online courses, program designers and educational organizations are looking for ways to ensure high quality in their course offerings. Is it possible to set up templates or models that service the needs of all learners and the quality assurance needs of organisations? And if so, how can it be applied to the ever-expanding range of content being taught online?

Defining 'template'

In the first instance we wish to clarify our perspective of what a template is, or can be. We contend that a template is a way of saving time and effort, and ensuring a level of consistency and coherency for students. It is also a way of facilitating the planning and development processes, and assuring a level of quality in courses. Commonly a template is viewed as an initial pattern or model which is copied. Patterns, moulds, stencils, and models are often used interchangeably to convey the idea that what is being developed can begin and end with the same elements and structure. As in document creation or desk-top publishing, a template is a file that serves as a starting point for a new document. The formating and style of the second document will be very similar to the first. When you open the template, it is pre-formatted in some way, but can be changed to suit your own particular needs, yet the basic structure remains the same. A template is generally thought of in terms of 'one-size fits all' circumstances. It is our view that this type of thinking is behind the promotion and use of templates in the development of online courses. There appears to be a belief that all course materials will fit neatly into a standard pre-determined format. Our experience suggests that such a view is erroneous and can lead to poor teaching and learning. However, we would argue that it might be possible to benefit from neuroscience to gain insight into ways of structuring learning experiences that facilitate a learner's access to information. These considerations might support the process of turning that information into knowledge, and support the ultimate impact of learning focused projects.

Examples of previous work developing templates

For several decades, learning designers have investigated template strategies for the creation of courses. Initially, these templates were little more than process documents dictating study directions and how resources were to be listed and formated for mail out to students of correspondence courses (Chick, 1992; Smith, 1979). In 1992, twenty-two campuses of California State University set out to train staff in how to create pedagogically sound online instruction, and instigated faculty development workshops to accommodate this purpose. Their 'tools, templates, and training' workshop provided staff with the ability to "begin with just a page or two, work up to a course module, and eventually understand the scope of effort necessary to scale their online modules to a full online course" (Hoffman & Ritchie, 1998). This workshop set a five-step model described as the I CARE system—Introduction, Connect, Apply, Reflect, and Extend with the view of setting the 'look and feel' of online courses. In their descriptive article, the authors noted that their high expectations for providing 'easy-to-use tools', and 'instructionally sound templates for courses and course modules' fell short of the mark.

In Australia, during the last decade, there have been several attempts to develop learning design templates to ease the burden of course creation on faculty. The Australian University Teaching Committee funded a project involving the University of Wollongong (Oliver, Harper, Hedberg, Wills, & Agostinho, 2002) which provided learning design exemplars (templates). These learning designs are meant as patterns for replication (accessible via http://www.learningdesigns.uow.edu.au/). Subsequently, Heathcote (2006) reports on a similar project for Queensland University of Technology, and McAlpine and Allen (2007) report on development at University of New South Wales. While these projects have been presented as models for curriculum development, the authors do not note how extensively the design templates have been applied within their own and other institutions.

Goodyear and colleagues have proposed the use of design patterns. As identified in the definition above, these also are templates. The choice of the design pattern is thought to be "dictated by an underlying philosophy of how the 'designer' believes the learners will gain from their interaction and experiences" (Goodyear et al., 2004, p. 3). The authors promote the focus of attention in using pattern designs to encompass three areas: "the learner's activity; the social relationships and social interactions within which that activity is situated; the affordances of tools and other artefacts in the physical environment (the 'learnplace')" (p.3). These ideas of a pattern language and design patterns were applied in the University of Wollongong project.

How templates are currently used

Too often, educational organisations use a template as a way of defining the look and feel of a course, specifying what elements it should contain without thorough consideration of how these impact the deeper educational experience. Many times online templates evolve from print-based correspondence course ideals. The following three examples suggest how many educational institutions interpret the application of templates to learning design. As a means for ensuring consistency and a base level of quality across all online courses in the school a Business School has specified that its teaching staff must include a minimum of 1 PDF and 1 forum per content topic in each teaching unit. Courses are to be set up to replicate the teaching weeks of the semester; and assessments are to be scheduled midway and at the end of each course.

Many adult learning organisations also consider standardisation as a prime strategy for achieving quality. Recently, a Registered Training Organisation which has run face-to-face courses successfully for several years is aiming to take their offerings online. They are aware that online best practice suggests video presentations should be reasonably short, so they have recorded 10 minute introduction videos for each content area, and provided PDFs for the remaining information to be covered. Their strategy for achieving standardised quality is to ask students to complete a quiz at the end of each content section.

In yet another example, we are aware that a tertiary institution is creating Open Education Resources for engagement with world populations intending to market learning opportunities available through their university. In doing so, a template was provided to the lecturers who would contribute a 'short course' to the university's database. The template asked each designer to:

- Provide the title and study time expectations of the directed learning activity, the self-directed activities and the formal assessment task
- State the learning outcomes
- Describe a directed learning activity
- Describe a self-directed learning activity
- List the skills to be learned in the module
- Set the assessment item
- List Resources

What do these types of templates have to offer—why are they used? A template is a way of maintaining the quality-assurance process, of providing a checklist of items that make up a course, and ensuring courses created adhere to a desired standard. They provide those who are building the course a way of checking their progress, and reporting this progress to project managers (and those in similar roles) with relative ease and clarity. They also provide a level of consistency across organizational offerings in terms of look and feel, which is seen as a way of assisting students who struggle with navigating online spaces. Futhermore, they assist as a way of ensuring the time required for those developing the course, those teaching it and those studying it, is readily calculable. *All of these are perfectly legitimate purposes!* However, the primary purpose missing from this list is that of providing a learning experience that is student-centred and maximises their own learning initiatives.

When templates are used in this way are they useful in facilitating flexible approaches to engaged learning? We maintain that these approches are not templates for *learning* – rather they are templates for presentation. Presentational templates and dictums, often aimed at quality standards do not provide space for the educator to consider the best tools available to them for creating engaging online learning experiences. Nor do they guide the educator through a process based on research findings of how people learn. Such templates do not consider how students can best engage with the course and demonstrate their application of newly acquired skills and knowledge. A presentation template setting the look and feel can help promote student security within an online space. Yet, an approach that mandates conformity in the style and format of activities misses the opportunity to engage students effectively with diverse course content, and thus promote engaged learning.

Thinking regarding templates that mandate course resources and activity elements as part of the presentation of the course confuses consistency in offerings with providing a standard level of learning quality across an organisation. There are two broad problems with this. The first is that even though specific tools can be mandated, this does not ensure they will be used effectively in the course. Particularly where the person responsible for running the course does not understand, or worse, disagrees with the reasons for the tool's inclusion, it will not be a part of an engaging learning experience for the student. For example, the Business School mentioned in the above example mandated the use of one forum per topic, however their staff have a variety of views on using forums. While some staff members facilitate stimultating discussion around the content of the course with their students, others are frustrated that students "never" use the forums in their courses. This often occurs because the forums are treated as individual student to tutor Q&A sessions, or as assignment clarification spaces. Some use the forums for social purposes only, preferring to keep the learning spaces in the course focussed on the provision of resources and presentational materials. Mandating the use of the tool has not resulted in a consistently high quality to the student experience.

The second problem is the focus of the template. Learning is owned by the learner – it cannot be mandated by any external source. Each learner has their own personality, their own past experiences to build on, and their own learning preferences or tendencies. These cannot be made to fit a standardised experience – nor should they. Without these personalising factors, the emotional component of learning (Norden, 2007; Zull, 2002, 2011) cannot take place. Perhaps then, a template is too rigid a tool to be used for designing online courses. While a standardised look and feel may be appropriate, this does not extend to standardised shopping lists of resources and activities. Instead it may be more appropriate to focus on more flexible templates or models for course designs, combined with a solid understanding of the core purposes of the course being designed. Using the insights from neuroscience, can we create a model of how the brain learns, and seek models of teaching that pair well with each learner's needs?

Templates for Learning

What if educators were to conceive of templates for learning as a way of guiding thinking to encompass the 'why' of a course followed by the 'how' rather than the 'what' as a first consideration? What if the concepts of neuroplacticity (Doidge, 2007; Howard-Jones, 2010) and the ability of the brain to adapt to changing contexts (Zull, 2006) were foundational to a learning template for the design of learner activities? It is now time to take note of neuroeducation research (Ablin, 2008; Tokuhama-Espinosa, 2011; Zull, 2011) and plan our learning environments accordingly (R. N. Caine & Caine, 2011).

How can we accommodate this purpose of providing a meaningful learning experience and provide replicable guidance to faculty who have limited or no knowledge of learning design? Particularly when the requirements of consistency and quality assurance controled by current templates still need to be accommodated?

We propose that templates need to be reconsidered and re-categorised based on their purpose. A template for crafting engaging online learning experiences needs to provide a framework for the thinking processes of those involved in the development and building of the course, as well as the thinking to be engaged by the learner. Further investigation of neuroeducational concepts underpinning student learning processes is needed. Refinement of the metacognitive process described by Zull (2011) as: random action → discovery → joy → intentional action → integration → images → symbol → forming memories → predicting → experiential change—is a pattern creating process. The human brain makes sense of life by finding patterns and order (G. Caine, Caine, & Crowell, 1999). It categorizes, finding similarities and differences and comparing and isolating features. In order to conduct this patterning activity, the human brain must have situations to test, to compare, and to resolve. "Learning is required when an entrenched pattern is challenged or disrupted and new answers are needed" (p. 30). Personal reflection based on practical experience is an important step in the metacognitive process, which enables the continuous reorganisation of information within the individual mind. The mysterious process of changing data (experience) into new knowledge is still unexplained (Norden, 2007; Zull, 2011). While we know the brain goes through a series of actions—experiencing, discovering, feeling, reasoning, and decision-making; we do not know precisely how it all comes together. Yet, we do know that the brain requires immersive experiences to build richly integrated neuronal networks. With further research we may be able to find strategies that assist faculty unfamiliar with learning design concepts to more easily move their focus from information packets to learning sequences.

With greater knowledge and understanding of how humans learn, we can support universal learning design with templates for learning rather than templates for presentation. Such a template does not specify end-point outputs – rather, it broadly outlines the steps in thinking that the learning designers and ultimately learners need to go through in considering what elements are incorporated into the course. Such a template treats iconography, graphical layout and navigational elements as separate (albeit important) elements of the course, and allows the developer to focus on how the learning processes will best be facilitated, and which tools will be brought into use to accomplish this, and how they will be applied. These tools may include PDF's and forums, assignments and quizzes, but they are not specifically limited to x number of y tools by the template. With greater knowledge of human learning processes the unique capabilities of many of our technology tools will be maximised to benefit both teacher and student.

Conclusion

Learning design decision-making is derived from multiple information bases, and necessitates the suspension of a cognitive commitment (E. Langer, 1994) to any one particular educational paradigm, quality assurance template, or learning design. Rather, it requires the curriculum designer to be mindful of these elements and engage in an adaptive design process. With additional research focused on neuroeducation, we may progress towards providing the support needed by faculty to help them think about their "content" differently; and to maximise the learning processes of our students. The 'why' of what students will be learning will then become the focus of the curriculum design process, rather than the 'what'.

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